

What is claimed is:

1. A method of determining comparable performance measures for employees having differing task assignments, comprising:

generating sets of task scores based on a selected model design of said task assignments;

performing a plurality of evaluations of said sets of task scores, said evaluations assigning productivity scores to said sets of task scores;

analyzing said productivity scores to determine productivity parameters; and

applying said productivity parameters to employee task scores for said employees to obtain said performance measures for said employees.

2. The method of claim 1, wherein said analyzing comprises applying linear regression techniques to said productivity scores.

3. The method of claim 2, wherein said linear regression is applied to an expression for said productivity scores having a form

$$PS_t(F_{t1}, F_{t2}, \dots, F_{tK}) = \alpha_t + \sum_{k=1}^K \beta_{tk} F_{tk} + \sum_{k=1}^K \sum_{k'=1}^K \gamma_{tkk'} F_{tk} F_{tk'}, \text{ where}$$

$F_{tk}$  is a measured value for a  $k^{th}$  task of assignment  $t$ ,

$PS_t$  is a productivity score for said assignment  $t$  as a function of said measured values,

$F_{t1}, F_{t2}, \dots, F_{tK}$ , and

$\alpha_t$ ,  $\beta_{tk}$  and  $\gamma_{tkk'}$  are said productivity parameters.

4. The method of claim 1, comprising selecting a centralized composite design as said model design.

5. The method of claim 4, wherein generating said sets of task scores comprises:

determining whether said sets of task scores exceed a predetermined number; and

modifying said centralized composite design by a fractional factorial when said sets of task scores exceed said predetermined number.

6. The method of claim 1, comprising:

calculating statistical measures for said performance measures over a time period; and

identifying employees having performance measures outside a range of said statistical measures.

7. The method of claim 6, comprising identifying trends in said performance measures over multiple ones of said time period.

8. The method of claim 1, wherein generating comprises adding a number of recorded task scores to said sets of task scores.

9. The method of claim 8, wherein said sets of task scores are scaled to represent performance by employees over a common work period, with a fixed number of hours worked.

10. The method of claim 1, wherein said plurality of evaluations are performed by a plurality of evaluators, said evaluators being familiar with said task assignments and with assigning productivity scores.

11. The method of claim 10, comprising:

assigning evaluator parameters to each of said plurality of evaluators;

comparing said plurality of productivity scores assigned by each of said evaluators using said evaluator parameters in analyzing said productivity scores to determine anomalous ones of said plurality of evaluations;

removing said anomalous ones of said plurality of evaluations; and

returning to analyzing said productivity scores.

12. The method of claim 11, wherein said sets of task scores are scaled to represent performance by employees over a common work period, with a fixed number of hours worked.

13. The method of claim 10, wherein generating comprises adding a number of recorded task scores to said sets of task scores, and using productivity scores assigned to said recorded task scores for each of said evaluators as one of said evaluator parameters.

14. The method of claim 1, wherein generating said sets of task scores comprises:

determining whether said sets of task scores exceed a predetermined number; and

modifying said selected model design by a fractional factorial when said sets of task scores exceed said predetermined number.

15. The method of claim 14, wherein said analyzing comprises applying linear regression techniques to said productivity scores.

16. The method of claim 15, wherein said linear regression is applied to the expression

$$PS_t(F_{t1}, F_{t2}, \dots, F_{tK}) = \alpha_t + \sum_{k=1}^K \beta_{tk} F_{tk} + \sum_{k=1}^K \sum_{k'=1}^K \gamma_{tkk'} F_{tk} F_{tk'}, \text{ where}$$

$F_{tk}$  is a measured value for a  $k^{th}$  task of assignment  $t$ ,

$PS_t$  is a productivity score for said assignment  $t$  as a function of said measured values,

$F_{t1}, F_{t2}, \dots, F_{tK}$ , and

$\alpha_t$ ,  $\beta_{tk}$  and  $\gamma_{tkk'}$  are said productivity parameters.

17. The method of claim 16 wherein said plurality of evaluations are performed by a plurality of evaluators, said evaluators being familiar with said task assignments and with assigning productivity scores.

18. The method of claim 17, comprising:

assigning evaluator parameters to each of said plurality of evaluators;

comparing said plurality of productivity scores assigned by each of said evaluators using said evaluator parameters in analyzing said productivity scores to determine anomalous ones of said plurality of evaluations;

removing said anomalous ones of said plurality of evaluations; and

returning to analyzing said productivity scores.

19. The method of claim 18, wherein generating comprises adding a number of recorded task scores to said sets of task scores, and using productivity scores assigned to said recorded task scores for each of said evaluators as one of said evaluator parameters.

20. The method of claim 19, comprising:

calculating statistical measures for said performance measures over a selected time period; and

identifying employees having performance measures outside a range of said statistical measures.

21. The method of claim 20, comprising identifying trends in said performance measures over multiple ones of said selected time periods.

22. A method of determining productivity parameters for evaluating employee performance for employees having differing task assignments, comprising:

generating sets of task scores based on a selected model design of said task assignments;

performing a plurality of evaluations of said sets of task scores, said evaluations assigning productivity scores to said sets of task scores;

applying linear regression techniques to said productivity scores to obtain said productivity parameters using an expression having a form

$$PS_t(F_{t1}, F_{t2}, \dots, F_{tK}) = \alpha_t + \sum_{k=1}^K \beta_{tk} F_{tk} + \sum_{k=1}^K \sum_{k'=1}^K \gamma_{tkk'} F_{tk} F_{tk'}, \text{ where}$$

$F_{tk}$  is a measured value for a  $k^{th}$  task of assignment  $t$ ,

$PS_t$  is a productivity score for said assignment  $t$  as a function of said measured values,

$F_{t1}, F_{t2}, \dots, F_{tK}$ , and

$\alpha_t, \beta_{tk}$  and  $\gamma_{tkk'}$  are said productivity parameters.

23. The method of claim 22, wherein generating said sets of task scores comprises:

determining whether said sets of task scores exceed a predetermined number; and

modifying said selected model design by a fractional factorial when said sets of task scores exceed said predetermined number.

24. The method of claim 22, wherein generating comprises adding a number of recorded task scores to said sets of task scores.

25. The method of claim 24, wherein said sets of task scores are scaled to represent performance by employees over a common work period, with a fixed number of hours worked.

26. The method of claim 22, wherein said plurality of evaluations are performed by a plurality of evaluators, said evaluators being familiar with said task assignments and with assigning productivity scores.

27. The method of claim 26, comprising:

assigning evaluator parameters to each of said plurality of evaluators;

comparing said plurality of productivity scores assigned by each of said evaluators using said evaluator parameters in analyzing said productivity scores to determine anomalous ones of said plurality of evaluations;

removing said anomalous ones of said plurality of evaluations; and

returning to analyzing said productivity scores.

28. The method of claim 27, wherein generating comprises adding a number of recorded task scores to said sets of task scores, and using productivity scores assigned to said recorded task scores for each of said evaluators as one of said evaluator parameters.

29. A computer-readable medium containing instructions for controlling a computer system to determine comparable performance measures for employees having differing task assignments, said instructions controlling said computer system to:

generate sets of task scores based on a selected model design of said task assignments;

obtain a plurality of evaluations of said sets of task scores, said evaluations assigning productivity scores to said sets of task scores;

apply linear regression techniques to said productivity scores to obtain said productivity parameters using an expression having a form

$$PS_t(F_{t1}, F_{t2}, \dots, F_{tK}) = \alpha_t + \sum_{k=1}^K \beta_{tk} F_{tk} + \sum_{k=1}^K \sum_{k'=1}^K \gamma_{tkk'} F_{tk} F_{tk'}, \text{ where}$$

$F_{tk}$  is a measured value for a  $k^{th}$  task of assignment  $t$ ,

$PS_t$  is a productivity score for said assignment  $t$  as a function of said measured values,

$F_{t1}, F_{t2}, \dots, F_{tK}$ , and

$\alpha_t$ ,  $\beta_{tk}$  and  $\gamma_{tkk'}$  are said productivity parameters; and

apply said productivity parameters to employee task scores for said employees to obtain said performance measures for said employees.

30. The computer-readable medium of claim 29, wherein said plurality of evaluations are performed by a plurality of evaluators, said evaluators being familiar with said task assignments and with assigning productivity scores.

31. The computer-readable medium of claim 30, comprising instructions for controlling the computer to:

assign evaluator parameters to each of said plurality of evaluators;

compare said plurality of productivity scores assigned by each of said evaluators using said evaluator parameters in analyzing said productivity scores to determine anomalous ones of said plurality of evaluations;

remove said anomalous ones of said plurality of evaluations; and

return to analyzing said productivity scores.

32. The computer-readable medium of claim 31, wherein:

said instructions to generate comprise instructions for controlling the computer to add a number of recorded task scores to said sets of task scores; and

said instruction to compare comprise instructions for controlling the computer to use productivity scores assigned to said recorded task scores by each of said evaluators as one of said evaluator parameters.



33. A computer implemented application on computer-readable medium, said application comprising instructions to compare employee performance for employees having differing task assignments, said application comparing employee performance by:

generating sets of task scores based on a selected model design of said task assignments;

obtaining a plurality of evaluations of said sets of task scores, said evaluations assigning productivity scores to said sets of task scores;

analyzing said productivity scores to determine productivity parameters;

applying said productivity parameters to employee task scores for said employees to obtain performance measures for said employees;

calculating statistical measures for said performance measures over a time period; and

identifying employees having performance measures outside a range of said statistical measures.

34. The computer implemented application of claim 33, wherein said analyzing comprises applying linear regression techniques to an expression for said productivity scores of a form

$$PS_t(F_{t1}, F_{t2}, \dots, F_{tK}) = \alpha_t + \sum_{k=1}^K \beta_{tk} F_{tk} + \sum_{k=1}^K \sum_{k'=1}^K \gamma_{tkk'} F_{tk} F_{tk'}, \text{ where}$$

$F_{tk}$  is a measured value for a  $k^{th}$  task of assignment  $t$ ,

$PS_t$  is a productivity score for said assignment  $t$  as a function of said measured values,

$F_{t1}, F_{t2}, \dots, F_{tK}$ , and

$\alpha_t$ ,  $\beta_{tk}$  and  $\gamma_{tkk'}$  are said productivity parameters.